



BCX54-BCX56

NPN Plastic-Encapsulate Transistors

SOT-89-3L

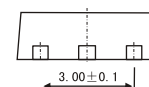
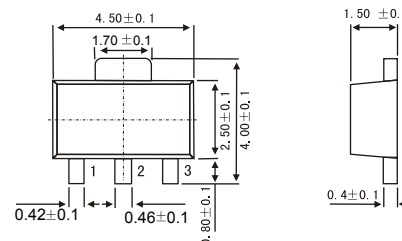


Features

- PNP Complements to BCX51,BCX52,BCX53
- Low Voltage
- High Current

Applications

- Driver Stages of Audio Amplifiers



Dimensions in millimeters

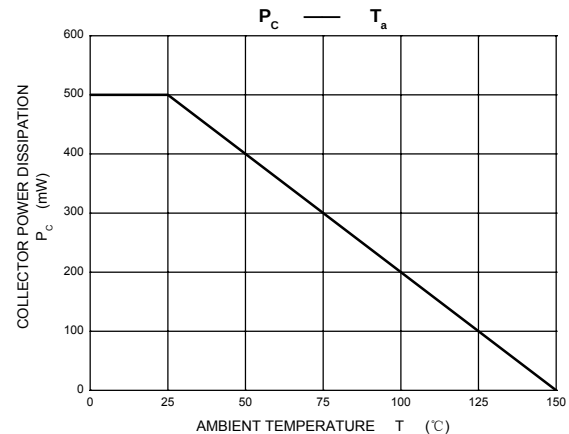
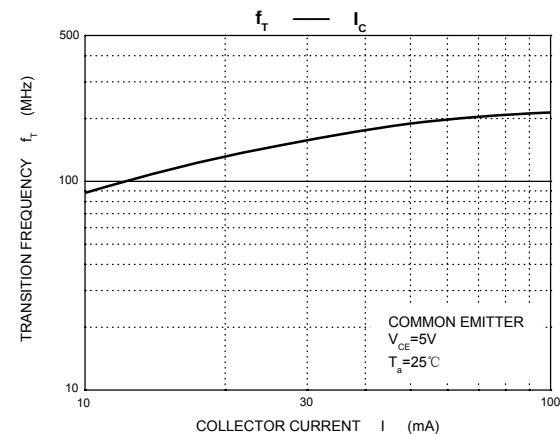
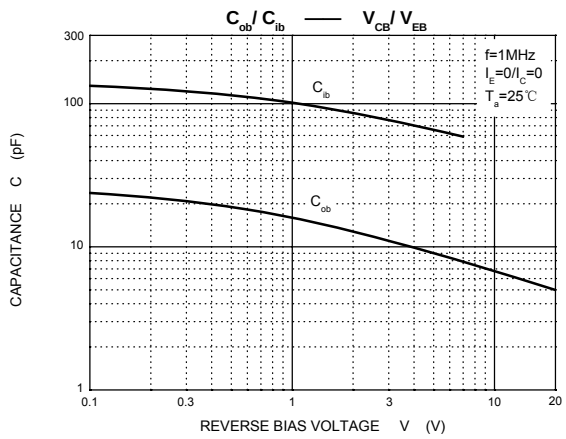
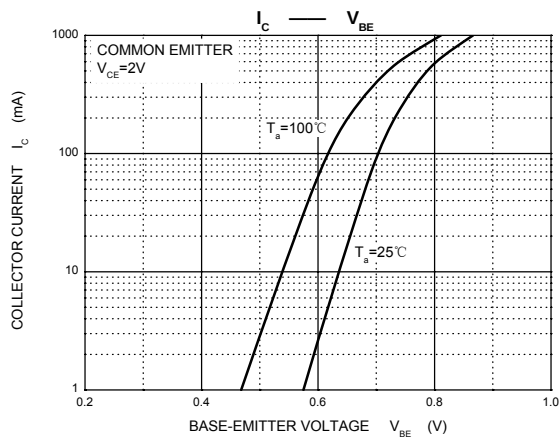
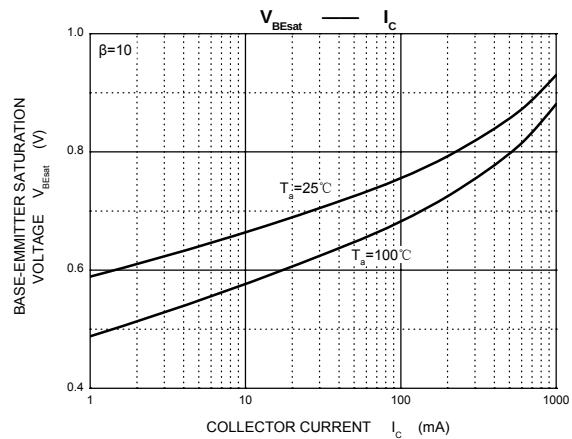
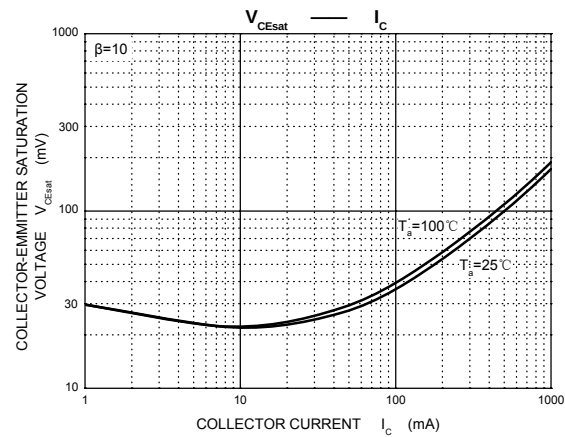
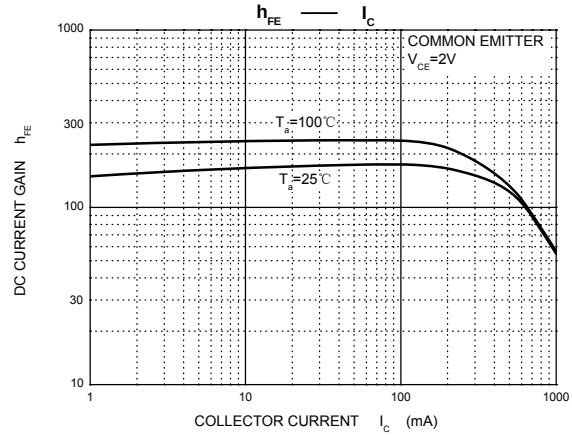
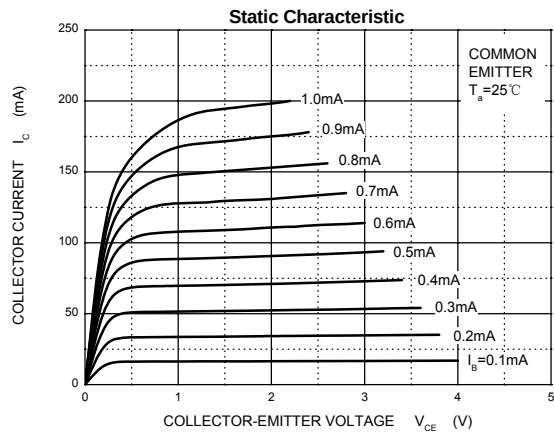
MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	BCX54	45
		BCX55	60
		BCX56	100
V_{CEO}	Collector-Emitter Voltage	BCX54	45
		BCX55	60
		BCX56	80
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	1	A
I_B	Base Current	0.1	A
I_{BM}	Peak base Current ($t_p < 1\text{ms}$)	0.2	A
P_C	Collector Power Dissipation	500	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	250	$^{\circ}\text{C/W}$
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55~+150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	BCX54	45		V
			BCX55	60		
			BCX56	100		
Collector-emitter breakdown voltage	$V_{(BR)CEO}^*$	$I_C=10\text{mA}, I_B=0$	BCX54	45		V
			BCX55	60		
			BCX56	80		
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=30\text{V}, I_E=0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$			0.1	μA
DC current gain	$h_{FE(1)}^*$	$V_{CE}=2\text{V}, I_C=5\text{mA}$	40			
	$h_{FE(2)}^*$	$V_{CE}=2\text{V}, I_C=150\text{mA}$	63		250	
	$h_{FE(3)}^*$	$V_{CE}=2\text{V}, I_C=0.5\text{A}$	25			
Collector-emitter saturation voltage	$V_{CE(sat)}^*$	$I_C=0.5\text{A}, I_B=50\text{mA}$			0.5	V
Base-emitter voltage	V_{BE}^*	$V_{CE}=2\text{V}, I_C=0.5\text{A}$			1	V
Transition frequency	f_T	$V_{CE}=5\text{V}, I_C=10\text{mA}, f=100\text{MHz}$		130		MHz

Typical Characteristics





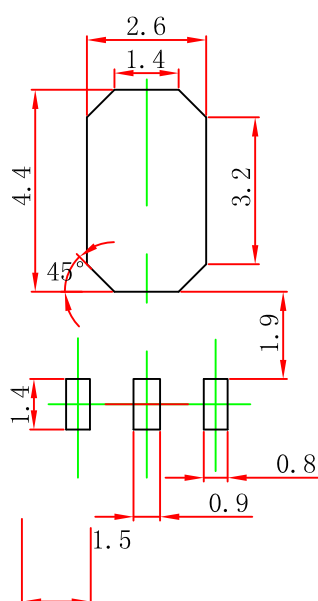
CLASSIFICATION OF $h_{FE(2)}$

RANK	BCX54-BA BCX55-BE BCX56-BH	BCX54-10-BC BCX55-10-BG BCX56-10-BK	BCX54-16-BD BCX55-16-BM BCX56-16-BL
RANGE	63 - 250	63 - 160	100 - 250

Pinning information

Pin	Simplified outline	Symbol
PinB Base PinC Collector PinE Emitter		

SOT-89-3L Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.

2. General tolerance: $\pm 0.05\text{mm}$.

3. The pad layout is for reference purposes only.